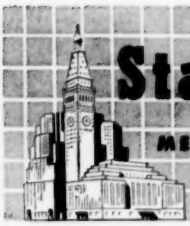

Statistical Bulletin

METROPOLITAN LIFE INSURANCE COMPANY

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Sex Difference in Mortality Increasing

FEMALES in the general population of the United States have for many years experienced a lower mortality than males and with the passage of time have been increasing their advantage. Both sexes have recorded marked reductions in mortality, as may be seen in the table on page 2, but the decreases have been appreciably greater for females than for males. As a consequence, whereas the age-adjusted death rate for white males exceeded that for white females by 18 percent in 1926-30, the excess increased to 55 percent in 1951-55. The figures on longevity, like those on mortality, show a widening disparity between the sexes. In 1926, the average length of life of white males in the United States was 57.0 years, compared with 59.6 years for white females, a difference of 2.6 years; in 1955, the respective figures were 67.3 and 73.6 years, a difference of 6.3 years.

The ratio of male to female mortality has increased at every period of life, but the extent of the rise has varied considerably with age. The smallest increase occurred at the youngest ages. Among infants, the excess male mortality rose only from 29 percent in 1926-30 to 33 percent in 1951-55, and at ages 1-4 from 13 to 19 percent. On the other hand, the most pronounced increase in the sex ratio of mortality was experienced in adolescence and early adult life. At ages 15-24, the death rate among white males exceeded that for white females by little more than 10 percent in 1926-30; in the most recent five-year period the rates were in the ratio of about 2½ to 1. An important factor in the growing divergence in mortality between the sexes for this age group has been the very marked reduction in maternal mortality rates. Another factor has been the sharp rise in fatal motor vehicle accidents among males.

Inspection of the lowest tier of Table 1 shows how radically the picture for the sex ratio of mortality by age has changed in the period under review. In 1926-30, at no age group was the difference in mortality between white males and white females as much as 30 percent; the largest sex differences

were observed in infancy, the school ages, and at the ages just past mid-life. In 1951-55, the widest divergence, as already noted, was at ages 15-24, while the smallest sex differences occurred among young children and at ages 65 and over.

Each of the leading causes of death has recorded a greater improvement among females than among males; the details are shown in Table 2. The age-adjusted death rate from the major cardiovascular-renal diseases among white females fell 28 percent between 1926-30 and 1951-55; among white males the corresponding decrease was only 4 percent. As a result of these differences in trend, the ratio of male to female mortality from the major cardiovascular-renal diseases rose from 1.17 to 1.56.

For the malignant neoplasms, the

TABLE 1—SEX RATIO OF MORTALITY BY AGE
White Persons, United States, 1926-55

Period	Age Period, Years									
	All Ages*	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and Over
	Average of Annual Death Rates per 100,000									
White Males										
1951-55.....	935.2	3,177.3	123.7	61.8	157.0	178.3	357.4	946.7	2,255.7	6,971.3
1946-50.....	993.1	3,861.4	158.0	78.5	167.3	201.7	408.6	1,018.3	2,364.5	7,015.2
1941-45.....	1,095.1	4,782.6	237.0	104.9	229.5	279.9	485.9	1,099.3	2,451.7	7,313.6
1936-40.....	1,195.8	6,016.1	362.0	132.5	225.7	315.1	558.4	1,195.1	2,539.0	7,770.6
1931-35†.....	1,233.4	6,554.2	476.2	164.2	261.9	365.5	611.9	1,213.1	2,529.3	7,633.7
1926-30‡.....	1,325.2	7,490.1	614.8	196.8	311.4	417.9	687.1	1,255.3	2,528.0	7,984.5
White Females										
1951-55.....	605.3	2,397.4	103.6	40.7	63.5	98.0	212.8	502.5	1,194.6	5,399.4
1946-50.....	685.1	2,940.4	130.7	51.7	84.8	131.1	260.5	584.2	1,369.7	5,673.6
1941-45.....	795.8	3,725.5	200.8	70.7	118.8	185.5	327.5	690.0	1,559.4	6,137.0
1936-40.....	932.6	4,651.7	313.6	98.8	166.9	259.0	412.0	809.4	1,781.0	6,765.1
1931-35†.....	1,004.5	5,090.6	417.5	129.3	214.7	324.8	477.9	884.1	1,912.3	6,822.4
1926-30‡.....	1,124.0	5,825.8	544.8	155.3	280.9	391.7	560.5	974.7	2,034.7	7,357.0
	Percentage of Male to Female Death Rate									
1951-55.....	155	133	119	152	247	182	168	188	189	129
1946-50.....	145	131	121	152	197	154	157	174	173	124
1941-45.....	138	128	118	148	193	151	148	159	157	119
1936-40.....	128	129	115	134	135	122	136	148	143	115
1931-35†.....	123	129	114	127	122	113	128	137	132	112
1926-30‡.....	118	129	113	127	111	107	123	129	124	109

*Death rates adjusted for age on basis of age distribution of total United States population (except Armed Forces overseas), April 1, 1940.

†Death Registration States in 1931 and 1932.

‡Death Registration States.

Source: National Office of Vital Statistics, Vital Statistics-Special Reports, Vol. 42, No. 14; Vol. 43, No. 1; Vol. 44, No. 15; Vol. 45, No. 7; Vol. 46, No. 5 and No. 8; Vital Statistics of the United States, 1954, Vol. 1.

TABLE 2—SEX RATIO OF MORTALITY FROM SELECTED CAUSES

White Persons, by Sex. United States, 1951-55 and 1926-30

Cause of Death	Average of Annual Death Rates per 100,000*				Percentage of Male to Female Death Rate	
	White Male		White Female			
	1951-55	1926-30	1951-55	1926-30	1951-55	1926-30
All Causes	935.2	1,325.0	605.3	1,124.0	155	118
Major cardiovascular-renal diseases	499.8	519.9	319.6	446.1	156	117
Malignant neoplasms†	135.7	107.8	116.7	130.8	116	82
Diabetes mellitus	11.2	17.7	15.4	26.6	73	67
Tuberculosis	14.5	73.2	5.8	62.5	250	117
Pneumonia and influenza	24.7	134.2	16.6	114.1	149	118
Ulcer of the stomach and duodenum	8.5	10.4	1.9	3.4	447	306
Accidents, total	80.6	116.3	29.1	46.1	277	252
Suicide	16.5	24.3	4.6	7.4	359	328

*Death rates adjusted for age on basis of age distribution of total United States population (except Armed Forces overseas), April 1, 1940.

†Includes Hodgkin's disease and leukemia.

Note: Because of revisions in the International List of Causes of Death, the level of the death rates for the two periods is not strictly comparable for the individual causes.

Source of basic data: Reports of National Office of Vital Statistics and of the Bureau of the Census.

two sexes show contrasting mortality trends when the two time periods are compared. While the age-adjusted death rate from this cause decreased from 130.8 to 116.7 per 100,000 among white females, the rate for white males rose from 107.8 to 135.7. Thus, an excess female mortality for the malignant neoplasms has been converted into an excess male death rate, largely because of the sharp upward trend in fatal lung cancer among men. Diabetes, however, continues to have an appreciably higher mortality among females, and is now the only major cause of death which has this characteristic.

Females have benefited to greater extent than males from the extraordinary progress made in the control of mortality from such infectious diseases as tuberculosis and pneumonia and influenza. Furthermore, even causes which have long recorded a marked excess male mortality—notably, ulcers of the stomach and duodenum, accidents, and suicide—have widened their sex differences.

The ratio of male to female mortality from all causes combined is smaller for nonwhite than for white persons. In 1951-55, the age-adjusted death rate for nonwhite males in the United States—1,294.2

per 100,000—exceeded that for nonwhite females—1,007.6 per 100,000—by 28 percent, which compared with an excess male mortality of 55 percent among white persons. The sex ratio among the nonwhite in recent years has been the same as that for the white about 15 years earlier.

The excess male mortality among white persons is smallest for the married and greatest for the unmarried. Data available for 1949-51 show that at ages 20-74 years the age-adjusted death rate for married men was about three fifths greater than that for married women; among the divorced the ratio of mortality for the two sexes was 2⅓ to 1. For the single, the ratio was only slightly lower, 2¼ to 1, and for the widowed, 2 to 1.

Longevity of Industrial Population at New High

THE average length of life among American wage-earners and their families exceeded the Biblical threescore and ten in 1956, according to the experience of the Industrial policyholders of the Metropolitan Life Insurance Company. The average reached a new high of 70.2 years, slightly above that for 1955. Among these insured the gain in longevity has amounted to 4½ years since 1946, 10 years since 1936, and 24 years since 1909. In 1879-94, the average lifetime was only 34 years, as may be seen in Table 1.

The average length of life of the Industrial policyholders has increased more rapidy than that of the general population of the United States. In 1909, for example, the longevity of these policyholders was about six years less than that of the population as a whole. Currently, however, the record for the two groups is about the same.

Particulars regarding longevity and mortality among the Industrial policyholders during 1956, at every fifth age from 5 to 65 years, are given in Table 2. Their mortality rates are very low in early life—less than 2 per 1,000 at ages 1 through 36—and remain under 5 per 1,000 until age 46. Only a decade earlier, the death rates at this period of life were at least 1½ times those currently experienced.

Each color and sex group among the policyholders has recorded a reduction in mortality. However, at the early adult ages, the colored are still at a considerable disadvantage compared with the whites. Among females the rates for the colored are at least double those for the whites from age 22 to the end of the childbearing period. For males the difference is not as large; nevertheless, at ages 23 through 36 the mortality of the colored is more than 1½ times that for the white.

TABLE 1—EXPECTATION OF LIFE AT BIRTH

Industrial Policyholders,* Metropolitan Life Insurance Company, 1879-94 to 1956

Calendar Year	Expectation in Years	Calendar Year	Expectation in Years	Calendar Year	Expectation in Years
1956	70.2	1942†	64.3	1928	55.9
1955	70.0	1941	63.4	1927	56.4
1954†	69.8	1940	62.9	1926	55.0
1953†	68.9	1939	62.5	1925	55.5
1952†	68.5	1938	61.9	1924	55.6
1951†	68.4	1937	60.7	1923	54.5
1950†	68.3	1936	60.3	1922	55.0
1949	67.7	1935	60.2	1921	55.1
1948	67.2	1934	59.5	1919-20	51.1
1947	66.5	1933	59.2	1911-12	46.6
1946†	65.6	1932	58.8	1909	46.3
1945†	64.9	1931	57.9	1879-94	34.0
1944†	64.4	1930	57.4		
1943†	63.9	1929	55.8		

Gain, 1956 since 1909, 23.9 years; since 1879-94, 36.2 years.

*The figures for 1948-1954 relate to Weekly and Monthly premium-paying policies; beginning with 1955 there are included, in addition, persons with Debit Book Ordinary policies for $2,000 or less; prior to 1948 the figures pertain to Weekly policies only.

†Excludes deaths from enemy action.

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TABLE 2—EXPECTATION OF LIFE AND MORTALITY AT SPECIFIED AGES

By Color and Sex, Industrial Policyholders,* Metropolitan Life Insurance Company, 1956

Age (Years)	Expectation of Life in Years					Mortality Rate per 1,000				
	Total Persons	White		Colored		Total Persons	White		Colored	
		Male	Female	Male	Female		Male	Female	Male	Female
5	67.4	64.0	70.3	62.4	65.8	0.4	0.4	0.4	0.7	0.5
10	62.5	59.1	65.4	57.6	61.0	.3	.3	.2	.4	.3
15	57.6	54.2	60.5	52.7	56.1	.6	.8	.3	.9	.6
20	52.8	49.5	55.6	48.1	51.3	.9	1.3	.5	1.8	.9
25	48.0	44.8	50.7	43.5	46.5	1.1	1.4	.6	2.4	1.4
30	43.3	40.1	45.9	39.0	41.9	1.2	1.6	.7	2.8	2.1
35	38.6	35.4	41.1	34.6	37.4	1.7	2.2	1.1	3.5	2.8
40	34.0	30.9	36.4	30.3	32.9	2.7	3.7	1.8	5.0	3.9
45	29.5	26.5	31.7	26.1	28.6	4.5	6.3	3.0	8.0	6.1
50	25.2	22.5	27.3	22.3	24.6	7.1	10.2	4.7	11.8	9.0
55	21.2	18.8	23.0	18.7	20.8	11.2	16.6	7.5	16.8	13.7
60	17.5	15.5	18.9	15.4	17.3	17.2	25.2	12.1	25.1	19.1
65	14.2	12.6	15.2	12.4	14.0	26.4	36.9	20.1	38.1	26.7

*Includes persons with Debit Book Ordinary policies for $2,000 or less.

The average lifetime is appreciably longer for females than for males. In 1956, the expectation of life among the policyholders at age 5 was 70.3 years for white females, compared with 64.0 years for white males; the corresponding figure for colored females was 65.8 years and for colored males, 62.4 years. For all policyholders at age 5, the 1956 figure was 3.6 years greater than that a decade earlier. Young adults have also made impressive gains; the expectation of life at age 25, for example, has increased 3.0 years since 1946. Even at age 45 the average future lifetime has been extended 2.2 years, and is now as much as 29.5 years.

Although the average length of life among the Industrial population has passed the Biblical threescore and ten, there is reason to believe that further progress will be made. The dramatic advances of medical science and public health administration — which have already markedly reduced infant mortality, and death rates from tuberculosis, pneumonia, and other diseases — will undoubtedly effect further gains in life conservation. In addition, present research in diagnostic techniques and therapy holds some promise for a greater measure of control over the cardiovascular-renal diseases and the malignancies, which are the predominant causes of death at the present time.

Geographic Variation in Fatal Accidents

THE mortality from accidents in the United States shows a characteristic geographic pattern year after year. The highest death rates are recorded among the residents of the Mountain region, while the lowest rates are found among those residing in the Northeast. In 1954-55, the six States with the poorest records—Nevada, Montana, Wyoming, Idaho, New Mexico, and Arizona — were all sparsely settled areas in the Mountain region. As may be seen in the table on page 8, the fatal accident rate in Nevada and Montana exceeded 90 per 100,000 population, which was more than 1½ times the national figure. At the other extreme were New Jersey, New York, and Rhode Island, with accident death rates under 45 per 100,000.

The geographic pattern for all types of fatal accidents as a group is determined in large measure by the variations in the motor vehicle accident death rate. In the Mountain States the mortality from such accidents — 32.9 per 100,000 in 1954-55—was more than twice that in either the New England or the Middle Atlantic region. Each of the eight Mountain States had a motor vehicle accident death rate above that for the country as a whole, most of them exceeding the national average by more than 50 percent. The mortality from this

type of accident alone in Nevada—47.1 per 100,000—was nearly 15 percent greater than the death rate from all accidents combined in New Jersey. Outside the Mountain region, the motor vehicle accident mortality was particularly high among the residents of Texas, Kansas, Michigan, and Georgia.

In contrast to the experience for motor vehicle accident fatalities, the death rate from falls is highest in the northeastern section of the country. Actually, in both the New England and the Middle Atlantic regions, falls outranked motor vehicle accidents as a cause of death. Massachusetts had the highest frequency of fatal falls in the country, the rate of 25.9 per 100,000 in 1954-55 being about twice that for motor vehicle accidents. Next in order were Rhode Island, Iowa, Missouri, and Pennsylvania. At the other extreme were South Carolina and New Mexico, with death rates less than one fourth the rate in Massachusetts. To an appreciable extent, the geographic variation in the mortality from falls reflects the proportion of older people residing in the various States. The aged account for a large majority of the fatally injured in accidental falls.

Conflagrations and burns by other means likewise record wide geographic differences in mortality. The South and Southwest suffer the highest death rates from this group of causes. In four southern States — Mississippi, South Carolina, Alabama, and Arkansas — conflagrations and burns by other means account for more deaths than falls. In part, the unfavorable record for the South reflects the much higher death rate from this cause in the nonwhite than the white population. Differences in type of housing undoubtedly contribute to the disparity in mortality between these two segments of the population.

The salient facts regarding the other causes of accidental death listed in the table may be briefly summarized. Both drowning and water transportation record relatively high death rates in Maine, Delaware, Florida, and Louisiana —all of them coastal States. Fatal firearm mishaps occur with greatest frequency in the Mountain and the southern areas. The mortality from machinery accidents, surprisingly enough, is generally low in the industrial States; the unfavorable record for the agricultural areas reflects the hazards in the use of farm machinery. The West and the South lead in fatal accidental poisoning by solids and liquids, which includes poisoning by barbiturates. A striking fact in this connection is the much higher death toll from barbiturates in California than in any other State; California residents accounted for one third of the 411 accidental deaths from barbiturates reported in the United States during 1955.

AVERAGE ANNUAL DEATH RATES PER 100,000 FROM SELECTED TYPES OF ACCIDENTS

By Geographic Divisions and States, 1954-55

(By Place of Residence)

Area	Accidents—Total	Motor Vehicles	Falls	Burns and Conflagrations	Drowning	Firearms	Machinery	Water Transport	Poisoning by Solids & Liquids	Absorption of Poisonous Gas
United States	56.4	22.8	12.3	4.4	3.1	1.4	1.2	.9	.9	.8
New England	52.1	14.1	20.6	3.5	3.0	.6	.7	1.1	.8	.9
Maine	58.0	18.4	12.6	5.5	4.2	1.6	1.5	2.8	.8	1.6
New Hampshire	52.8	17.2	16.1	4.6	3.6	.8	1.1	.8	1.0	.6
Vermont	55.4	18.3	14.8	3.2	4.2	1.4	2.3	1.9	.5	.8
Massachusetts	54.8	13.1	25.9	3.5	2.7	.5	.6	.6	.7	.8
Rhode Island	44.0	10.7	18.3	2.7	3.0	.4	.3	2.0	.9	.6
Connecticut	46.0	14.2	15.1	2.6	2.7	.4	.6	1.0	1.0	1.0
Middle Atlantic	45.9	15.2	15.4	3.2	2.6	.6	.7	.6	.6	1.0
New York	44.2	14.2	15.4	3.0	2.6	.5	.6	.6	.5	1.1
New Jersey	41.6	14.4	12.7	3.3	2.6	.4	.5	.6	.5	1.0
Pennsylvania	50.7	17.0	16.5	3.4	2.1	.8	1.1	.5	.7	1.0
East North Central	54.8	24.0	13.2	3.5	2.7	1.0	1.2	.9	.6	.8
Ohio	55.0	23.2	15.1	3.5	2.2	.7	1.1	.7	.6	1.1
Indiana	61.9	25.9	15.7	4.4	2.7	1.3	1.3	.6	.7	.8
Illinois	50.3	20.7	11.9	3.6	2.7	1.2	1.2	.6	.7	.8
Michigan	57.1	28.3	11.4	3.2	3.1	.9	1.0	1.3	.5	.7
Wisconsin	53.6	24.1	12.6	2.3	3.1	1.0	1.8	1.4	.5	.6
West North Central	63.5	24.7	15.0	4.1	2.7	1.5	2.4	.8	.6	.7
Minnesota	54.1	21.0	13.8	3.0	3.0	.9	2.1	1.3	.7	.9
Iowa	62.9	23.7	17.2	3.6	2.5	1.0	3.0	.8	.3	.5
Missouri	66.9	25.1	16.8	5.0	2.4	2.1	1.9	.8	.9	.5
North Dakota	63.0	25.8	11.5	3.3	3.6	2.2	3.9	.8	.5	.9
South Dakota	67.9	27.5	11.7	3.3	4.0	2.4	3.6	.8	.6	.9
Nebraska	62.4	24.6	14.1	3.6	2.6	1.4	2.9	.4	.6	.4
Kansas	71.9	29.5	13.4	5.3	2.6	1.6	2.1	.4	.5	.9
South Atlantic	59.2	24.4	8.8	5.7	3.8	2.0	1.1	1.3	1.2	.5
Delaware	59.1	24.6	10.1	5.3	4.4	.7	1.5	2.5	1.4	.5
Maryland	50.2	18.7	11.5	4.4	3 1	1.0	.9	1.2	.8	.5
District of Columbia	50.3	13.2	18.9	4.3	2.3	.3	.2	.9	1.0	.3
Virginia	56.6	22.5	9.0	6.5	3.4	1.6	1.0	1.2	1.2	.4
West Virginia	59.7	19.8	10.1	5.2	3.6	2.6	1.8	.6	.8	1.1
North Carolina	59.2	26.7	6.8	5.5	3.9	1.8	1.2	1.4	1.2	.3
South Carolina	60.3	26.8	5.3	7.2	4.0	2.6	1.2	1.2	1.6	.3
Georgia	64.3	28.2	7.3	7.1	3.5	2.6	1.5	1.2	1.4	.4
Florida	64.6	27.5	9.8	4.6	5.4	2.4	1.0	1.7	1.3	.7
East South Central	61.6	25.9	9.1	6.9	3.5	2.3	1.4	1 0	.9	.4
Kentucky	68.0	27.4	13.2	6.3	3.5	2.3	1.5	.6	.9	.6
Tennessee	54.3	24.9	8.6	4.9	2.8	1.9	1.3	1.0	.8	.4
Alabama	62.5	27.3	7.3	7.7	3.5	2.1	1.3	1.5	1.1	.3
Mississippi	63.1	23.3	6.9	9.9	4.5	3.3	1.5	1.2	1.0	.1
West South Central	63.3	27.3	8.5	6.0	4.2	2.2	1.5	1.1	.9	.5
Arkansas	65.3	24.7	8.2	8.7	3.7	2.8	2.2	1.3	.9	.3
Louisiana	60.2	22.2	8.7	6.7	5.3	2.0	1.5	2.9	.9	.3
Oklahoma	68.1	26.9	11.5	5.5	3.6	2.2	1.4	.4	.8	.9
Texas	62.6	29.7	7.7	5.3	4.1	2.2	1.4	.7	.9	.5
Mountain	73.1	32.9	10.0	4.0	3.9	3.0	2.1	.7	1.2	.9
Montana	90.1	36.7	14.8	5.1	5.2	3.6	3.4	1.6	.9	2.2
Idaho	79.4	34.5	9.0	4.3	4.6	3.9	4.6	1.7	.9	.8
Wyoming	86.2	38.2	10.2	4.9	4.2	4.5	3.5	.7	.7	2.5
Colorado	62.9	26.7	12.4	2.9	2.9	2.3	1.8	.6	1.1	.5
New Mexico	77.0	37.3	5.9	4.3	3.9	4.0	1.8	.5	1.4	1.3
Arizona	73.5	36.1	7.0	5.9	5.2	1.9	1.0	.3	1.9	.6
Utah	59.4	25.9	10.3	1.9	2.6	2.9	1.4	.5	.8	.4
Nevada	93.9	47.1	10.2	4.9	4.5	3.8	.7	.3	1.6	.7
Pacific	56.1	25.8	8.8	3.5	3.3	1.1	1.1	1.1	1.5	.9
Washington	58.8	20.1	12.6	4.1	4.2	1.3	1.4	1.6	1.1	1.5
Oregon	64.2	25.8	9.6	3.9	4.2	1.9	2.7	1.9	.9	1.3
California	54.4	27.0	7.9	3.3	3.0	.9	.8	.8	1.6	.8

Source of basic data: Reports of National Office of Vital Statistics.

Recent Progress in Control of Maternal Mortality

AMONG the notable medical and public health achievements of recent years has been the marked reduction in mortality incidental to pregnancy and childbirth. In 1956, when registered births in the United States reached a record high of 4,168,000, less than 1,600 deaths were reported as due to puerperal conditions—one maternal death for every 2,700 live-born babies. The maternal mortality rate in 1956 was only 3.8 per 10,000 live births, which represents a reduction of about one half in the last five years and of three fourths in the last decade, after allowance is made for changes in procedures of classifying puerperal deaths. As the table on page 10 shows, each of the major causes of maternal mortality has recorded a sharp decrease, with the largest reduction —85 percent between 1944 and 1954—in the mortality from puerperal infections.

It should be noted, however, that the number of deaths ascribed to childbearing somewhat understates the problem. The effect of introducing the Sixth Revision of the International List of Causes of Death in 1949 was to reduce by nearly 10 percent the number of deaths assigned to maternal causes. Moreover, a considerable number of maternal deaths among pregnant women are not reported as such. In one recent study the actual number was about 75 percent more than the reported number.*

Both age and the socioeconomic status of the mother affect the level of maternal mortality. The hazards of childbearing increase rapidly with advance in age after 30. This reflects in part the extra risk for older women bearing their first child, and perhaps in part the effect of many or closely spaced pregnancies. The adverse effect of unfavorable socioeconomic conditions is reflected in the higher maternal mortality among nonwhite women, their rate being nearly four times that for the white. Nonwhite women now account for nearly 40 percent of the annual maternal death toll in our country, although they give birth to only about 15 percent of the babies.

The medical profession — particularly obstetricians, gynecologists, and other specialists — are continuing their efforts to make childbearing as safe as possible. Many State and local medical organizations, and especially hospital staffs, conduct careful surveys to determine the factors responsible for maternal deaths in their area and how they can be prevented. Most of these studies,† in variance with vital statistics reports, show that hemorrhage is the principal cause of maternal deaths,

*Jewett, J. S., "Changing Maternal Mortality in Massachusetts," *The New England Journal of Medicine*, Vol. 256, p. 395, February 28, 1957.

†Summarized in "A Guide for Maternal Deaths Studies," Committee on Maternal and Child Care of the Council on Medical Services, American Medical Association, 1957.

MAJOR CAUSES OF MATERNAL MORTALITY

United States, 1954 and 1944

Cause of Death	Rate per 10,000 Live Births		Percent Decline	Percent of Total	
	1954	1944*		1954	1944
All Causes	5.2	20.7	75	100	100
Toxemias	1.5	5.8	74	29	28
Hemorrhage	1.0	3.3	70	19	16
Abortion†	0.7	3.1	77	13	15
Sepsis	0.6	3.9	85	12	19
Ectopic pregnancy	0.4	1.2	67	8	6
Other complications	1.0	3.4	71	19	16

*Rates estimated on the basis of the Sixth Revision of the International List.

†Includes abortion with toxemia or sepsis.

Source of basic data: Hunt, E. P., and Moore, R. R., *Perinatal, Infant, Childhood and Maternal Mortality, 1954*, Statistical Series No. 42, Children's Bureau, 1957.

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accounting for one fourth the deaths classified as obstetric. Next in rank are toxemia, with about one fifth of the obstetrical deaths, and sepsis, with about 10 to 15 percent. These studies indicate that a relatively high proportion of the deaths, especially from hemorrhage and toxemia, could have been prevented by adequate prenatal care, better obstetric management—including the more judicious use of anesthesia and replacing blood where necessary—and the prevention and control of infections. Deaths from ectopic pregnancy, which account for 8 percent of the maternal mortality in official statistics, can usually be prevented by early diagnosis and prompt surgery. The handicap of chronic disease in the mother, not infrequently a determining factor in the fatal outcome of pregnancy, may in many cases be overcome by utilizing more effectively the services of consultants in the various medical specialties.

The studies made under medical auspices naturally emphasize the responsibility of the physician in reducing maternal deaths. A major part of the responsibility, however, rests with the women themselves. They need to realize the importance of seeking prenatal care early, of observing good health and nutritional habits during pregnancy, and of cooperating completely with their physicians. Community responsibility involves the provision of adequate prenatal clinics, hospital and nursing facilities, especially in low income areas, and making available pertinent knowledge regarding childbearing.

MORTALITY FROM SELECTED CAUSES

Industrial Policyholders, Metropolitan Life Insurance Company

August 1957

Cause of Death	Annual Rate per 100,000 Policyholders*				
	August		Year to Date		
	1957†	1956	1957†	1956	1955
All Causes	614.6	593.6	652.0	644.2	637.3
Tuberculosis (all forms)	5.5	6.5	6.8	7.7	8.3
Communicable diseases of childhood	.1	.2	.2	.3	.3
Acute poliomyelitis	.2	.7	.1	.2	.4
Malignant neoplasms	135.1	127.6	136.2	130.9	130.4
Digestive system	47.9	42.4	47.8	44.6	45.8
Respiratory system	19.0	17.3	19.1	17.5	16.5
Diabetes mellitus	12.8	13.3	14.8	15.4	15.4
Diseases of the cardiovascular-renal system	318.9	309.3	348.9	342.8	337.4
Vascular lesions, central nervous system	65.1	61.4	67.0	67.1	66.4
Diseases of heart	233.1	225.7	256.3	250.6	245.5
Chronic rheumatic heart disease	9.9	11.0	11.4	11.9	12.4
Arteriosclerotic and degenerative heart disease	184.7	174.3	200.2	194.8	189.1
Diseases of coronary arteries	106.1	102.0	113.8	111.7	109.2
Hypertension with heart disease	30.4	31.3	34.3	35.3	35.4
Other diseases of heart	8.0	9.1	10.3	8.6	8.6
Nephritis and nephrosis	6.0	6.8	7.9	8.0	8.9
Pneumonia and influenza	11.8	11.0	15.3	16.8	15.5
Complications of pregnancy, childbirth	.7	.4	.9	.9	1.0
Suicide	6.0	5.7	5.8	5.8	6.2
Homicide	4.1	2.7	2.9	2.2	2.2
Accidents—total	40.5	42.0	35.1	37.6	36.1
Motor vehicle	16.1	16.8	14.8	15.7	14.5
All other causes	78.9	74.2	85.0	83.6	84.1

*The death rates prior to March 1956 relate to persons insured under Industrial premium-paying policies and persons with Ordinary Monthly Premium Policies for Less Than $1,000; beginning with March 1956, included also are persons with Debit Book Ordinary policies for $2,000 or less.

†The death rates for 1957 are provisional.

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MORTALITY FROM ALL CAUSES

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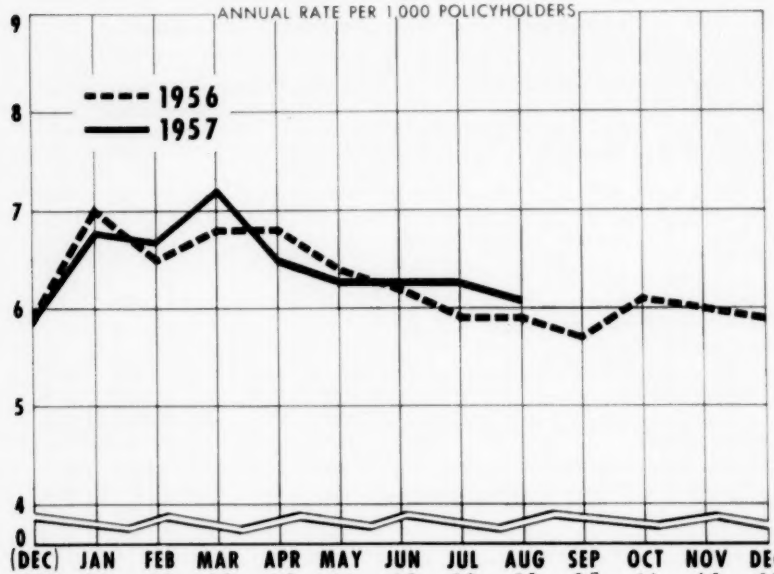

(DEC)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1956	7.0	6.5	6.8	6.8	6.4	6.2	5.9	5.9	5.7	6.1	6.0	5.9
1957	6.8	6.7	7.2	6.5	6.3	6.3	6.3	6.1				

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